

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )  
 )  
Revisions of the Commission's Rules )  
To Ensure Compatibility with ) CC Docket No. 94-102  
Enhanced 911 Emergency Calling ) DA 98-2631  
Systems )  
 )

To: Chief, Wireless Telecommunications Bureau

**OPPOSITION TO WAIVER REQUESTS**

SigmaOne Communications Corporation ("SigmaOne") hereby respectfully submits its general opposition to the requests for a waiver of Section 20.18 of the Commission's rules that were filed on February 4, 1999 ("the Waiver Requests") pursuant to the Wireless Communications Bureau's December 24, 1998 Public Notice<sup>1</sup>. As SigmaOne stated in its Comment filed with the Commission on February 4, 1999, there are no unique or special circumstances that warrant a grant of the Waiver Requests.<sup>2</sup> There is no "good cause" for a grant of the Waiver Requests because alternative technology is available to address all non-ALI capable handsets by October 1, 2001.

SigmaOne urges the Commission to deny the Waiver Requests for the following reasons:

(I) The Waiver Requests are not in the public interest because they will delay the deployment of

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<sup>1</sup> *Wireless Telecommunications Bureau Outlines E911 Rule Waivers for Handset-Based Approaches to Phase II Automatic Location Identification Requirements*, Public Notice, DA 98-2361 (rel. Dec 24, 1998) (the "Public Notice").

<sup>2</sup> See generally, Comments of the Phase II Working Group filed on February 4, 1999 (hereinafter "Phase II Working Group Comments").

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the Phase II Automatic Location Identification requirements; (II) The Waiver Requests fail to plead with particularity the facts and circumstances that warrant a deviation from the Commission's established deadline of October 1, 2001 and thus, fail to meet the heavy burden that is placed upon one seeking a waiver of the Commission's rules; and (III) A grant of the Waiver Requests would create a double standard favoring handsets over network based technologies.

#### **I. Handset-Based Waivers Are Unnecessary and Contrary to the Public Interest**

A grant of the Waiver Requests is not in the public interest because it would delay the implementation of the Phase II ALI requirements and unnecessarily place millions of lives at risk.<sup>3</sup> Last year 68 million wireless subscribers made approximately 30,000,000 million wireless E911 emergency calls. By October 2001, there will be over 100 million wireless subscribers with non-ALI handsets that will rely on their wireless handsets for assistance in emergencies. Therefore, the number of emergency calls will nearly double by October of 2001. The Commission's goal in setting October 1, 2001 as the "flash cut" deadline was to "ensure the rapid, efficient, and effective deployment of ALI as part of E911, in order to promote the public safety and welfare."<sup>4</sup> Permitting carriers to delay the implementation of E-911 location beyond the October 1, 2001 deadline will put lives at risk and increase the probability of serious bodily injury. Thus, nothing could be further from the public interest.

#### **II. The Waiver Requests Fail to Meet the Conditions Stated in the Public Notice**

A waiver is only warranted under Sections 1.3 and 24.819 of the Commission's rules if:

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<sup>3</sup>See Phase II Working Group Comments.

<sup>4</sup>*E911 Reconsideration Order*, 12 FCC Rcd at 22725 (¶ 123).

“the underlying purpose of the rule(s) would not be served or would be frustrated and a waiver would serve the public interest; the application of the rule would be inequitable, unduly burdensome, or contrary to the public interest; or good cause for waiving the rule can be demonstrated.”<sup>5</sup> However, “[a] heavy burden traditionally has been placed on one seeking a waiver to demonstrate that his arguments are substantially different from those which have been carefully considered at the rulemaking proceeding.”<sup>6</sup> None of the Waiver Requests directly address the Commission’s request for the concrete steps that the carrier would take to improve accuracy and reliability, rapidly introduce ALI-capable handsets, minimize problems associated with non-ALI-capable handsets and effectively address the roamer problem as discussed below.<sup>7</sup>

#### **A. Accuracy and Reliability of Handsets**

The Commission stated in its Public Notice that “A *commitment* by a carrier to provide a *significantly* higher level of accuracy could . . . help justify a phase-in of ALI over time, through upgrading or replacing handsets.”<sup>8</sup> Although some Waiver Requests contain preliminary field results with an external GPS antenna, none of the Waiver Requests have compelling evidence regarding either the accuracy of the proposed technology, the improved reliability of the technology or the availability of the product.

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<sup>5</sup>47 C.F.R. §§ 1.3, 24.819.

<sup>6</sup>*Industrial Broadcasting Company v. F.C.C.*, 437 F.2d 680, 683 (D.C. Cir. 1970).

<sup>7</sup>*WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), cert. denied, 409 U.S. 1027 (1972) (“*WAIT Radio*”).

<sup>8</sup>*FCC Public Notice*, DA 98-2361, December 24, 1998, 64 Fed.Reg. 3478, January 22, 1999 (“*Waiver Notice*”) at 3. (*emphasis added*.)

First, it is critical to note that none of the tests were conducted with integrated handsets where the GPS antenna has been incorporated into the phone. Serious questions have been raised about the applicability of these tests. Second, and even more disturbing, even with an external GPS antenna the accuracy levels asserted by many of the carriers are significantly lower than the accuracy levels claimed by at least one GPS technology vendor. Either the carriers are uncomfortable with that vendor's results, or the carriers are simply unsure about the future performance of GPS enabled phones.<sup>9</sup> Third, not a single waiver request contains any claims with respect to the increased reliability of ALI capable handsets beyond the 67%-70% level contained in the Phase II requirements.<sup>10</sup>

The projected accuracy improvement to 90 meters is moderate at best.<sup>11</sup> Moreover, no evidence has been presented that the projected improvement in accuracy will have any effect in saving lives, preventing serious injury or improving the dispatch efficiency of PSAPs. In fact, based on its own testing, SigmaOne strongly believes that potential for loss of life and the increased risk of serious injury caused by a delay in the implementation of the rules will far outweigh the theoretical benefit of an additional 35 meters in location accuracy.<sup>12</sup> Based upon the

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<sup>9</sup> See for example Petition for Waiver of 20.18 (E) of the Commission's Rules filed by Ameritech on February 4, 1999.

<sup>10</sup> See Petition for Waiver of 20.18 (E) of the Commission's Rules filed by Powertel Inc. on February 4, 1999.

<sup>11</sup> During the last six months SigmaOne has obtained a one sigma accuracy of 60 meters in its test area.

<sup>12</sup> SigmaOne's field trials indicate that a 35 meter difference in location accuracy is often difficult for the human eye to discern. In fact, actual dispatch instructions by a PSAP will rarely, if ever, change because of the 35 meter improvement predicted by the Waiver Requests. SigmaOne urges the Commission to view an actual location field test conducted by SigmaOne on November 20, 1998 at [www.Sigma-1.com/livedemo.htm](http://www.Sigma-1.com/livedemo.htm). As the test clearly shows, a 35 meter change in location accuracy is hardly noticeable and certainly would not effect a PSAP's

speculative nature of the performance of ALI handsets and the minor improvement in accuracy, SigmaOne urges the Commission that a delay in the Phase II deadline is not in the public interest.

## **B. Timetable for Implementation**

Pursuant to the Public Notice, carriers are required to submit definitive plans for the implementation of ALI-capable handsets.<sup>13</sup> Nevertheless, the implementation schedules submitted by carriers are either extremely vague or conditioned upon the speculative future performance or availability of ALI-capable handsets. Under the terms of most of the Waiver Requests, the sale of a single ALI-capable handset would satisfy a carrier's implementation schedule. Moreover, no major handset vendor has committed to manufacturing ALI-capable handsets, let alone to a specific introduction date or to specific quantities. Nor has a single major handset vendor agreed to stop producing non-ALI capable handsets. In the real world the availability of both non-ALI-capable and ALI-capable handsets will be critical factors in determining whether the implementation schedule submitted by a carrier is realistic or merely optimistic. A carrier's good intentions are simply not sufficient cause for a waiver of the Commission's rules.<sup>14</sup>

## **C. Steps to Minimize Problems Associated with Non-ALI-capable handsets**

Most of the Waiver Requests rely on the replacement of non-ALI handsets to solve the problem of non ALI-capable handsets. As stated above, the availability of ALI-capable handsets

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dispatch instructions to field personnel.

<sup>13</sup> *Public Notice* at 4.

<sup>14</sup> *WAIT Radio*, 418 F.2d at 1153.

is highly speculative at best. If a carrier does not guarantee the availability of ALI capable phones, owners of non-ALI capable handsets cannot purchase them. Moreover, even if we assume that such handsets will be available, the owners of non-ALI-capable handsets may not purchase them. Thus, the estimates regarding the adoption rate of ALI-capable phones amount to no more than simple guesses. Since there is no absolute and unequivocal obligation on the part of carriers to solve the problem of non-ALI-capable handsets, the Waiver Requests must be denied.

#### **D. Roamers are not Adequately Protected**

None of the Waiver Requests filed with the Commission solves the roamer problem. The Waiver Requests have either ignored the roamer problem or have attempted to use statistical projections to support speculative solutions. For example, several of the Waiver Requests presented a statistical analysis that 95% of wireless subscribers will own ALI-enabled handsets by the end of the year 2004. The assumption underlying this analysis is flawed because it assumes that all carriers will implement an ALI-capable handset solution and that all handset manufacturers will only produce ALI-capable handsets. None of the Waiver Requests support either proposition.

Since only a minority of the carrier community has filed for Waiver Requests, it is unlikely that the majority of subscribers will ever purchase ALI-capable handsets. Under these circumstances, the statistics presented to the Commission are not only misleading; they are simply wrong. Under the terms of the Waiver Requests roamers with non-ALI-capable handsets will simply never receive wireless E-911 location protection.

The roaming problem is most acute for subscribers with AMPS handsets. AMPS is the key to roaming in the United States because it has a national footprint. Neither the carriers, the

handset manufacturers, or any other company has developed any concrete and realistic plans for the manufacture of ALI-capable AMPS handsets. Moreover, no Waiver Request suggests that support for AMPS handsets will be discontinued after October 2001. On the contrary, all cellular carriers currently support AMPS and are continuing to purchase AMPS-TDMA or AMPS-CDMA base stations. Plans that offer Phase I protection for millions of roamers fail on their face – if the Commission would have been satisfied with the location accuracy of Phase I, Phase II would never have been required in the first place. Until a comprehensive roaming plan is presented, SigmaOne urges the Commission to deny Waiver Requests that fail to provide an adequate solution to the roaming problem.

### **III. Granting the Waiver Requests Would Create a Double Standard in Favor of Handset Technologies**

The Commission has said repeatedly stated that it wants its policies to be technologically and competitively neutral with respect to possible approaches to wireless E911 location. Nevertheless, the Commission has embarked on a course of action that is not technology neutral. Even the title to the Public Notice was clearly written to provide waivers for ALI-capable handsets at the expense of network based location approaches. A grant of the Waiver Requests would therefore create a double standard by giving an unfair advantage to ALI-handset manufacturers.

The fatal flaw in the Waiver Requests is easily demonstrated by simply imagining the response of the Commission if the Public Notice had been written in a technology neutral manner to include network based location systems. A waiver request from a carrier experimenting with a promising but unproven network technology would contain the following statements (statements that very closely follow the claims made in the very best handset Waiver Requests).

- (1) the carrier will work diligently and in good faith with the network vendors;
- (2) preliminary trials show an accuracy of 90 meters, 67% of the time;
- (3) **if feasible and the product is made available**, the carrier would begin deployment by October of 2001;
- (4) **if feasible and the product is made available**, the Carrier will obtain 90% coverage of its area by October 2004;
- (5) the carrier will keep the Commission informed of its progress regarding deployment.

It is inconceivable that the Commission would grant a network waiver based upon these claims. Moreover, SigmaOne would urge that the Commission deny such a waiver request. The hypothetical network waiver request is vague and ambiguous, promises little in the way of performance enhancements and would unnecessarily delay the October 1, 2001 deadline set by the Commission in 1996. Not only does it fail to make any definitive claims regarding the timeline for implementation or improved reliability, but the marginal accuracy improvement to 90 meters hardly serves as a justification under WAIT for a waiver.<sup>15</sup> Nevertheless, the Commission is being urged to grant virtually identical waivers for ALI-capable handsets. Waiver grants based upon these conditions would create the type of technological double standard for competing technologies that the Commission has long sought to avoid.

#### **IV. Commitments Contained in Waiver Requests Must Be Fulfilled**

Although SigmaOne strongly believes that all of the Waiver Requests have failed to meet both the standards of WAIT and the specific requirements contained in the Public Notice, if the Commission receives a waiver request that meets the WAIT conditions and the technical requirements of the Public Notice, then the Commission must act to ensure that commitments

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<sup>15</sup> Under the terms of the hypothetical network waiver request, the construction of two location sites by October 2001 would constitute compliance. Similarly, under the terms of many of the Waiver Requests, the sale of a single ALI-capable handset would constitute compliance.



contained in the waiver request are fulfilled. The failure to meet the commitments described in the Waiver Requests must have ramifications.<sup>16</sup>

Accordingly, SigmaOne urges the Commission to adopt three distinct rules for compliance with Waiver Requests. First, carriers that have voluntarily chosen to delay implementation of the October 1, 2001 deadline by adopting an ALI-handset solution, should be prohibited from activating non-ALI handsets after October 1, 2001.<sup>17</sup> Such a condition will ensure that carriers seeking to promote public safety by adopting a handset approach do just that – promote the public safety. Second, the Commission must clearly and unequivocally inform carriers that if they are granted waivers to implement an ALI-capable handset solution, and they later elect to implement a network based solution, the carriers will not be relieved of their obligation to meet the October 1, 2001 deadline. This will clearly indicate that the waiver process cannot be used as means to postpone the October 1, 2001 deadline.

Third, commitments made regarding the adoption rate of ALI-capable handsets must be honored. If the adoption rates used to justify a waiver request are not met, the carrier must be responsible for correcting the imbalance by either replacing or upgrading non-ALI-capable

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<sup>16</sup>Commitments made in a waiver request must be fulfilled. The Commission should not tolerate explanations regarding implementation delays such as the following: (1) The public is not adopting ALI-capable handsets at the rate anticipated by the carrier in its waiver request because market forces control the adoption rate; (2) Non-ALI-capable handsets are still in the distribution system and are being given away by retailers for free or at a very low price; (3) ALI-capable handsets do not work well, have bad coverage or are not reliable; (4) Manufacturers are continuing to produce non-ALI-capable handsets or are failing to deliver ALI-capable handsets at a sufficient rate; and (5) Carriers or retailers have contractual agreements with manufacturers to continue to purchase non-ALI-capable handsets.

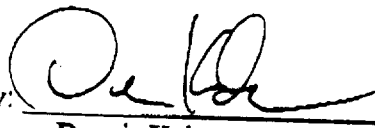
<sup>17</sup>This would be easy to implement with unique bar codes or specially marked ALI-capable handsets.

handsets. Such a rule will ensure that waiver requests contain realistic and achievable penetration rates rather than overly optimistic adoption rates for ALI-capable handsets.

## V. Conclusion

The Commission should deny the Waiver Requests because they will delay the deployment of the Phase II Automatic Location Identification ("ALI") requirements and are not in the public interest. A grant of any of the Waiver Requests will put lives at risk, increase the risk of serious injury and is inconsistent with the underlying policy of Section 20.18(e) of the Commission's rules. A grant of the Waiver Requests would create a double standard to the detriment of network based location solutions. The Waiver Requests are too vague and speculative, rely on technology that is not proven and fail to meet the requirements set forth in the Public Notice. They fail to meet the heavy burden imposed under WAIT Radio and are bad public policy. Wherefore, for the foregoing reasons, SigmaOne respectfully requests the Commission to deny the Waiver Requests of Section 20.18 of the Commission's rules.

Respectfully submitted,  
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By:   
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February 16, 1999

CERTIFICATE OF SERVICE

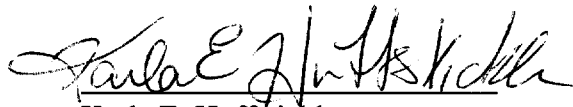
I hereby certify on this 16<sup>th</sup> day of February 1999, that copies of the foregoing Opposition to Waiver Requests were served via hand delivery to the following persons:

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